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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/730,550

12/08/2003

Mototsugu Abe

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10/06/2006

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EXAMINER

WARREN, DAVID S

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/730,550

Applicant(s)

ABE ET AL.

Examiner

David S. Warren

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-17 and 19-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-17 and 19-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/20/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 13 – 15, 25, and 26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As per MPEP 2106 (IV)(B)(1)(a), the claims must positively recite a “computer-readable medium” and not merely a computer program per se. For the Applicant’s convenience, the appropriate section of the MPEP is as follows:

Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process and Office personnel should treat a claim for a computer program, **without the computer-readable medium** needed to realize the computer program’s functionality, as **nonstatutory functional descriptive material**.
[Emphasis added.]

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 3, 5, 6, 10 – 17 and 19 - 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockett (2004/0165730) in view of Chiba (5,727,121).

Regarding claims 1, 10, and 13, Crockett discloses the use of an acoustic signal processing apparatus having an amplitude calculating means for calculating short-term amplitudes (this is synonymous with sampling; see Crockett paragraphs 26 and 51, and claim 15), candidate domain extraction means (see portion within the “event boundaries” in fig. 3A; also see step 5-3, and paragraph 50), feature extraction means for extracting sound quality featuring quantities (this is synonymous with spectral analysis and is identified by Crockett as a “signature” – see paragraph 36), and a candidate domain evaluating means (this synonymous with Crockett’s spectral difference means). Crockett does not explicitly disclose the use of short-term power spectrum coefficients, short-term cepstrum coefficients, nor Karhunen-Loeve transformations. Chiba, discloses acoustic audio extracting means using cepstrum coefficient analysis (col. 6, penultimate paragraph – note that Chiba also includes power analysis which part of the cepstrum coefficients). It would have been obvious to one of ordinary skill in the art to combine the teachings of Crockett and Chiba to obtain a feature extracting technique using cepstrum coefficient analysis. The motivation for making this combination would be to allow the use of the Fourier transform (a well-documented audio analysis tool). Regarding claims 2, 11, and 14, Crockett’s audio events are synonymous with Applicant’s acoustic events (see Crockett’s claim 1). Regarding claims 3, 12, and 15, Crockett teaches the use of indexing means to

generate start and end positions of an audio event (the boundaries of fig. 3A are start and end positions of an audio event). Regarding claims 5 and 19, Crockett uses thresholds to determine an event (see paragraph 50). Regarding claims 6 and 20, Crockett determines whether or not the candidate domain is a “featuring portion” (the Examiner maintains that any audio event assigned boundaries is a featuring portion). Regarding claims 16, 23, and 25, all limitations have been discussed supra except the “degree of crucialness.” The Examiner maintains that this is similar to the spectral difference measurements (i.e., the larger the spectral difference, the more “crucial”). For example, if the spectral difference between segments is above a threshold (i.e., are crucial) boundaries will be assigned to an audio event. Also, Crockett shows storing of values as step 5-4 (i.e., recording). The limitations of claims 17, 24, and 26 have been discussed supra (see discussion of claim 2 above). Regarding claims 21 and 22, the Examiner maintains that all genres are “valid” (the Examiner notes that the Applicant has not defined valid genre) that overcome Crockett’s threshold. It would have been obvious to one of ordinary skill in the art to modify the teachings of Crockett to include power spectrum thresholds and plural thresholds. The motivation for making this modification is to employ easily available techniques which have widespread application within the audio analysis field (e.g., to make use of commercially available audio analysis tools).

4. Claims 7 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockett in view of Chiba and in further view of Smith (5,533,136). The teachings of Crockett and Chiba have been discussed supra. Crockett nor Chiba do not teach the

use of an "insertion detection" means for detecting a domain "sandwiched between neighboring ones of ... sound domains as being ... an insertion domain" wherein the insertion is a commercial message. The teachings of Crockett can, by means of spectral analysis, detect any audio signal having a different analysis, but Crockett (and Chiba) is silent as to using such a system to detect an "insertion" such as a commercial. The patent to Smith discloses the use of detecting and attenuating a commercial. It would have been obvious to one of ordinary skill in the art to combine the teachings of Crockett and Smith to obtain a system to detect the presence of a commercial (i.e., an "insertion"). The motivation for making this combination is that commercials are generally considered a nuisance and removing them would increase the enjoyment and save the time of a user of the Crockett device.

Response to Arguments

5. Applicant's arguments with respect to independent claims 1, 10, 13, 16, 23, and 25 have been considered but are moot in view of the new ground(s) of rejection. The Examiner would only like to add that, as stated in the previous Office Action, the Applicant's method of gleaning coefficients is deemed to be functionally equivalent to those of Crockett, i.e., the use of any Fourier analysis to determine sound qualities. Furthermore, the Specification is silent as to any advantage that cepstrum coefficients would have over the FFT coefficients of Crockett. However, to strengthen the Examiner's argument, the reference to Chiba have been added.

Information Disclosure Statement

6. The references listed on the IDS (submitted September 10, 2006) have been considered by the Examiner. However, the Examiner believes that reference JP 11-238701 may have been listed erroneously due to the subject matter differences between the claims and this reference. Applicant is requested to verify that this reference was intended.

Conclusion

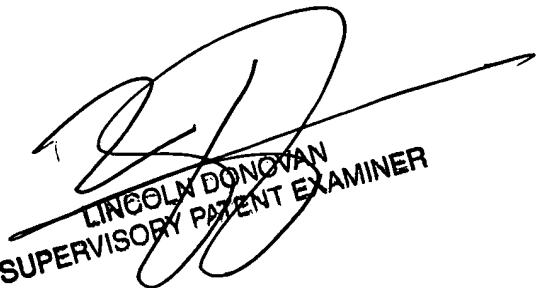
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Warren whose telephone number is 571-272-2076. The examiner can normally be reached on M-F, 9:30 A.M. to 6:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-2837. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2837

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

dsw



LINCOLN DONOVAN
SUPERVISORY PATENT EXAMINER